

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A collector structure that is arranged to be located at a level above a field of reflectors and to receive solar radiation reflected from reflectors within the field; the collector structure comprising an inverted trough and, located within the trough, a plurality of longitudinally extending absorber tubes that, in use, are arranged to carry a heat exchange fluid, the absorber tubes being supported side-by-side within the trough and each absorber tube having a diameter that is small relative to the aperture of the trough, wherein an absorber tube is the plurality of absorber tubes are freely supported by a rotatable support member which rotates about an axis that is orthogonal to the absorber tubes, and wherein said rotatable support member extends between side walls of the channel portion of the inverted trough.

Claim 2 (previously presented): The collector structure as claimed in claim 1 wherein the diameter of each absorber tube to the dimension of the trough aperture has a ratio in the range of 0.01:1.00 to 0.10:1.00.

Claim 3 (previously presented): The collector structure as claimed in claim 1 wherein the diameter of each absorber tube to the dimension of the trough aperture has a ratio of about 0.03:1.00.

Claim 4 (previously presented): The collector structure as claimed in claim 1 wherein there are about ten to thirty of the absorber tubes supported side-by-side within the trough.

Claim 5 (previously presented): The collector structure as claimed in claim 1 wherein there are sixteen of the absorber tubes supported side-by-side within the trough.

Claim 6 (previously presented): The collector structure as claimed in claim 1 wherein each of the absorber tubes is constituted by a metal tube.

Claim 7 (previously presented): The collector structure as claimed in claim 1 wherein each of the absorber tubes is coated over at least a portion of its surface with a solar absorptive material coating.

Claim 8 (currently amended): The collector structure as claimed in claim 1 wherein the absorber tubes are freely supported by a series of rotatable support members which rotate about

an axis that is orthogonal to the absorber tubes, and wherein the series of rotatable support members extend between side walls of the channel portion of the inverted trough.

Claim 9 (previously presented): The collector structure as claimed in claim 1 and incorporating a longitudinally extending roof, and wherein the inverted trough is located in spaced relationship below the roof.

Claim 10 (original): The collector structure as claimed in claim 9 wherein an insulating material is located in the space between the inverted trough and the roof.

Claim 11 (previously presented): The collector structure as claimed in claim 1 wherein a window that is substantially transparent to solar radiation extends across the aperture of the inverted trough and thereby closes the trough to create a heat confining cavity within the trough.

Claim 12 (original): The collector structure as claimed in claim 11 wherein the window is formed from a flexible plastics sheet material that is connected to marginal side wall portions of the trough.

Claim 13 (original): The collector structure as claimed in claim 12 wherein means are provided to pressurise the cavity and thereby inflate the window in a direction away from the absorber tubes.

Claim 14 (previously presented): The collector structure as claimed in claim 1 wherein means are provided in use to control flow of the heat exchange fluid in parallel, linear streams through the plurality of absorber tubes.

Claim 15 (previously presented): The collector structure as claimed in claim 1 and including means provided for selectively varying the channelling of the heat exchange fluid into and through the plurality of absorber tubes whereby the absorption aperture of the collector structure is, in use, effectively varied.

Claim 16 (previously presented): A collector system comprising a plurality of the collector structures as claimed in claim 1, the collector structures being connected together co-linearly to form a row of the structures.

Claim 17 (original): The collector system as claimed in claim 16 wherein each of the absorber tubes extends along the full row as a single length of tubing.

Claim 18 (previously presented): The collector structure as claimed in claim 1, wherein the trough is surmounted by a corrugated roof.

Claim 19 (previously presented): The collector structure as claimed in claim 1, wherein the trough is surmounted by a roof that is carried by arched structural members.

Claim 20 (new): A solar energy collection system comprising a field of ground mounted reflectors arrayed in rows and a collector structure as claimed in claim 1 mounted above said reflectors and positioned to receive solar energy from said reflectors.